

Appl. No. : 10/821,806
Filed : April 9, 2004

REMARKS

Claims 1-26, 29 and 30 are pending in the present application and stand rejected under 35 U.S.C. §102 or 35 U.S.C. §103. Claim 1 has been amended to correct a typographical error. Claim 30 has been amended to correct the informality and recite the proper antecedent basis in claim 1. No new matter is added by these amendments.

The drawings filed on August 30, 2004 were objected to by the Examiner. However, the Examiner has since withdrawn his objection to the drawings, as indicated in writing to Applicants on August 10, 2006. Applicants therefore submit that the present drawings are in proper condition for examination.

Claim Objections

The Examiner objected to claim 30 as including informalities, in particular, stating the “method of claim 1” wherein claim 1 is a system. In reply, Applicants have amended claim 30 to recite the “system of claim 1” as suggested by the Examiner. Applicants respectfully submit that the pending claims do not have informalities and request the withdrawal of the objection.

Claim Rejections Under 35 U.S.C. §102

The Examiner rejected claims 1-3, 6, 10-14, 24-26 and 30 under 35 U.S.C. §102(b) as being anticipated by Kitsu (U.S. Patent 4,382,348). The Examiner asserted that Kitsu discloses a plant cultivation system as claimed and notes that Kitsu teaches a floating plant system that is capable of use in fresh and saline water. Applicants respectfully disagree with the Examiner as discussed below.

Anticipation under Section 102 can be found only if a reference shows exactly what is claimed. *Titanium Metals Corp. v. Banner*, 778 F.2d 775 (Fed. Cir. 1985). More particularly, a finding of anticipation requires the disclosure in a single piece of prior art of each and every limitation of a claimed invention. *Electro Med. Sys. S.A. v. Cooper Life Sciences*, 34 F.3d 1048, 1052 (Fed. Cir. 1994). “To anticipate, every element and limitation of the claimed invention must be found in a single prior art reference, arranged as in the claim.” *Brown v. 3M*, 265 F.3d 1349 (Fed. Cir. 2001).

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Claim 1 is directed to a plant cultivation system for growing terrestrial plants in saline water, comprising a plant support comprising a buoyant portion and at least one terrestrial plant in contact with the plant support, wherein the plant support is buoyant in the saline water, and wherein at least a portion of the plant contacts the saline water. As written, saline water is an important feature of the system subject matter in the claim 1. However, Kitsu teaches a soilless plant growing device that can float on a nutrient solution and can also be used in a pond, river or other suitable nutrient solution source. First, Kitsu discloses a plant growing device, whereas the instant application teaches a plant cultivation system. Secondly, there is no teaching or suggestion in Kitsu that the device can be used or is intended for use in saline water. In contrast, saline water is an important component in the subject matter of claim 1. As Kitsu does not teach every feature of the claimed subject matter, Kitsu does not anticipate claim 1 nor its dependent claims including claims 2-3, 6, 10-14, 24-26 and 30. Applicants therefore respectfully request withdrawal of the rejection.

Claim Rejections Under 35 U.S.C. §103

The Examiner rejected claims 4, 5, 7-9, 15-19, 20-22, 23 and 29 under 35 U.S.C. §103(a) as being unpatentable over Kitsu alone or in view of Raskin (U.S. Patent 5,876,484), Shryock (U.S. Patent Application No. 10/223,803, published as U.S. 2003/0049392), or Kiode (U.S. Patent 5,261,185). Applicants respectfully disagree with the Examiner and submit that the claims are patentable over the cited art as discussed below.

The Patent and Trademark Office has the burden under section 103 to establish a *prima facie* case of obviousness. *In re Piasecki*, 745 F.2d 1468, 1471-72, 223 USPQ 785, 787-87 (Fed. Cir. 1984). To establish a *prima facie* case of obviousness, three basic criteria must be met: first, the prior art reference (or references when combined) must teach or suggest all the claim limitations; second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; finally, there must be a reasonable expectation of success. *See* M.P.E.P. § 2143.

Claims 4, 5 and 15-19 were rejected under as being unpatentable over Kitsu in view of Raskin. The Examiner asserts that Raskin discloses a plant system wherein the water contains a

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metal ion or lead and further, that Raskin discloses a plant system comprising an irrigation system. Therefore, the Examiner argues that it would have been obvious to one of ordinary skill in the art at the time of the invention to further modify Kitsu's plant system in view of the teachings of Raskin (1) to include a contaminant in the water for the purpose of removing the contaminant and purify the water, and (2) to include an irrigation system to supply the system with fresh water. Raskin teaches a method for reducing an amount of metal in a metal-containing solution by either allowing uptake of metal ions into a plant biomass or by conversion of soluble metal ions into an insoluble form. The method involves cultivating appropriate plants for metal removal by using a feeder layer method that is kept moist by a drip irrigation system. However, as discussed in the anticipation rejection of claims by Kitsu, Kitsu discloses only a soilless plant growing device. Kitsu does not teach or suggest a plant cultivation **system** that is intended for use in saline water. As a result, Kitsu in combination with Raskin does not teach a plant cultivation system for growing terrestrial plants in saline water as claimed in the instant application.

Claims 7-9 and 20-22 were rejected under as being unpatentable over Kitsu in view of Shryock. The Examiner asserts that Shryock discloses a plant system comprising a growth medium. Therefore, the Examiner argues that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kitsu's plant system in view of the teachings of Shryock (1) to include a growth medium for the purpose of providing nutrients to the plants, and (2) to include a growth medium on the sheet between the buoyant members for the purpose of providing nutrients to the plants. Shryock teaches modules that can be connected together to form composite floating gardens that are intended for aesthetic uses on a pond or similar water-body. The modules can be filled with soil or some equivalent. However, as previously discussed, Kitsu does not teach or suggest a plant cultivation **system** that is intended for use in saline water. Consequently, Kitsu in combination with Shryock does not teach a plant cultivation system for growing terrestrial plants in saline water as claimed.

Claim 23 was rejected as being unpatentable over Kitsu as applied to claim 20 and further in view of Kiode. The Examiner asserts that Kiode discloses a plant system comprising an evaporative protective layer. Therefore, the Examiner argues that it would have been obvious to one of ordinary skill in the art at the time of the invention to further modify Kitsu's plant system

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in view of the teachings of Kiode to include an evaporative protective layer to protect the plants from outside elements. Kiode teaches a water culture apparatus which prevents root bases of plants from becoming submerged in a nutrient solution. The apparatus includes a cover sheet capable of water retention to be placed over plant containers and provide humidity suitable for germination of the plants. However, as discussed above, Kitsu does not teach or suggest a plant cultivation **system** that is intended for use in saline water. As a result, Kitsu in combination with Kiode does not teach a plant cultivation system for growing terrestrial plants in saline water as claimed.

Claim 29 is rejected as being unpatentable over Kitsu. The Examiner argues that it would have been an obvious choice to plant a specific type of plant depending on what is aesthetically pleasing to the user. Kitsu does not disclose the choice of any specific plant type in the use of the described soilless plant growing device. Furthermore, Kitsu does not teach a plant cultivation system as claimed for growing terrestrial plants in saline water comprising a plant support comprising a buoyant portion and at least one terrestrial plant in contact with the plant support, wherein the plant support is buoyant in saline water, and wherein at least a portion of the plant contacts saline water.

As discussed in the anticipation rejection of claims by Kitsu, Kitsu discloses only a soilless plant growing device. Kitsu does not teach or suggest a plant cultivation **system** that is intended for use in saline water. The Examiner further relied on Raskin, Shryock and Kiode as secondary references to provide additional teachings for the claimed features of the dependent claims. However, the cited art do not remedy the deficiencies of Kitsu. As such, the combinations of Kitsu and Raskin, Shryock and Kiode do not teach or suggest all the features of the rejected claims and therefore do not set forth a *prima facie* case of obviousness. In view of this, Applicants submit that claims 4, 5, 7-9, 15-19, 20-22, 23 and 29 are patentable over the cited art in combination or alone. Applicants therefore respectfully request the withdrawal of the rejection.

Conclusion

In view of the amendments and arguments presented above, Applicants submit that the present application is in condition for allowance and respectfully request the same. If any issues


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remain, the Examiner is cordially invited to contact Applicants' counsel at the number provided below in order to resolve such issues promptly.

Respectfully submitted,

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